Peberdy, J. F., 33:21-39 Pelliccione, N. J., 33:95-111 Pike, R. M., 33:41-66 Pistole, T. G., 35:85-112 Postgate, J. R., 34:183-207 Pribnow, D., 35:365-403 Probst, I., 33:561-94

(

Queener, S. W., 32:593-636

R

Raffel, S., 36:1-26 Reanney, D. C., 36:47-73 Reichenbach, H., 35:339-64 Riley, M., 32:519-60 Ristic, M., 35:325-38 Roberts, G. P., 35:207-35 Robson, R. L., 34:183-207

S

Sanders, J. E., 35:273–98 Schachter, J., 34:285–309 Schlegel, H. G., 35:405–52 Schmidt, E. L., 33:355–76 Schneider, T., 35:365–403 Schroth, M. N., 35:453–76 Schwarzhoff, R. H., 32:101–22 Sebek, O. K., 22:593-636 Shinedling, S., 35:365-403 Shipley, P. L., 34:465-96 Silver, J. C., 32:249-84 Silver, M., 34:263-83 Silver, S., 32:637-72 Singer, B. S., 35:365-403 Sjoblad, R. D., 34:69-108 Smibert, R. M., 32:673-709 Smith, D. I., 32:469-518 Solomon, G. F., 35:155-84 Stanier, R. Y., 34:1-48 Stark, A.-A., 34:235-62 Starr, M. P., 34:645-76 Stewart, W. D. P., 34:497-536 Stewart-Tull, D. E. S., 34:311-40 Stormo, G., 35:365-403 Summers, A. O., 32:637-72

T

Tanaka, A., 36:145-72 Tilton, R. C., 36:467-93 Tomasi, T. B., 35:477-96 Tomasz, A., 33:113-37 Tonn, S. J., 33:169-99 Trentini, W. C., 32:123-41 Troy, F. A., 33:519-60

U

Umezawa, H., 36:75-99

V

van Oss, C. J., 32:19-39 Vézina, C., 32:593-636 Vidaver, A. K., 36:495-517

W

Wagman, G. H., 34:537-57
Wallis, C., 33:413-37
Wang, L.-H., 32:561-92
Warren, R. A. J., 34:137-58
Weaver, R. E., 34:341-67
Weckesser, J., 33:215-39
Weinstein, M. J., 34:537-57
Weiss, E., 36:345-70
Whitcomb, R. F., 34:677-709
White, R. J., 36:415-33
Whitley, R. J., 32:285-300
Whittenbury, R., 33:481-517
Wicke, W. J., 32:155-83
Wilkinson, H. W., 32:41-57
Williams, F. D., 32:101-22
Williams, F. D., 32:101-22
Williams, R. C., 32:1-18
Woodruff, H. B., 35:1-28
Wu, H. C. P., 34:369-422

V

Yewdell, J. W., 35:185-206

7

Zeikus, J. G., 34:423-64 Zinkernagel, R. M., 33:201-13 Zuckerman, S. H., 33:267-307

CHAPTER TITLES, VOLUMES 32-36

PREFATORY CHAPTERS		
Spectroscopes, Telescopes, Microscopes	R. C. Williams	32:1-18
Evolution of a Microbial Ecologist	R. E. Hungate	33:1-20
The Journey, not the Arrival, Matters	R. Y. Stanier	34:1-48
A Soil Microbiologist's Odyssey	H. B. Woodruff	35:1-28
Fifty Years of Immunology	S. Raffel	36:1-26
DIVERSITY AND SYSTEMATICS		
Group B Streptococcal Infection in Humans	H. W. Wilkinson	32:41-57
Medically Important Yeasts	D. G. Ahearn	32:59-68
Motility and Chemotaxis of Spirochetes Nature of the Swarming Phenomenon in	E. Canale-Parola	32:69-99
Proteus	F. D. Williams, R. H.	
	Schwarzhoff	32:101-22
Biology of the Genus Caryophanon Formation, Properties, and Germination of	W. G. Trentini	32:123-41
Actinomycete Spores	J. C. Ensign	32:185-219
The Genus Serratia	P. A. D. Grimont, F. Grimont	32:221-48
Genetics and Physiology of Acinetobacter	E. June	32:349-71
Organic Nutrition of Chemolithotrophic	20 7010	02.045 72
Bacteria	A. Matin	32:433-68
The Genus Campylobacter	R. M. Smibert	32:673-709
Catabolic Pathways of Coryneforms,		
Nocardia, and Mycobacteria Lipopolysaccharides of Photosynthetic	T. A. Krulwich, N. J. Pelliccione	33:95-111
Prokarvotes	J. Weckesser, G. Drews, H.	
	Mayer	33:215-39
Population Ecology of Nitrifying Bacteria	L. W. Belser	33:309-33
Biology of Oligotrophic Bacteria	S. I. Kuznetsov, G. A. Dubinina, N. A. Lapteva	33:377-87
Members of the Genus Actinoplanes and their		
Antibiotics	F. Parenti, C. Coronelli	33:389-411
Biological and Biochemical Aspects of		
Microbial Growth on C1 Compounds	J. Colby, H. Dalton, R. Whittenbury	33:481-517
The Biology of Gastrointestinal Bacteroides	J. M. Macy, L. Probst	33:561-94
Recent Taxonomic Developments and	3. M. Macy, L. 1100st	
Changes in Medical Mycology	M. R. McGinnis	34:109-35
Chlamydiae	J. Schachter, H. D. Caldwell	34:285-309
Some Aspects of Structure and Function in		
N ₁ -Fixing Cyanobacteria Natural Populations of the Genus	W. D. P. Stewart	34:497-536
Staphylococcus	W. E. Kloos	34:559-92
The Genus Spiroplasma	R. F. Whitcomb	34:677-709
The Biology of Hemotrophic Bacteria	J. P. Kreier, M. Ristic	35:325-38
Taxonomy of the Gliding Bacteria Physiology and Biochemistry of Aerobic	H. Reichenbach	35:339 -64
Hydrogen-Oxidizing Bacteria Gliding Motility of Prokaryotes:	B. Bowien, H. G. Schlegel	35:405-52
Ultrastructure, Physiology, and Genetics The Biology of Hyphomicrobium and Other	R. P. Burchard	35:497-529
Prosthecate, Budding Bacteria Low-Molecular Weight Enzyme Inhibitors of	R. L. Moore	35:567-94
Microbial Origin	H. Umezawa	36:75-99

Primary Amebic Meningoencephalitis and the		
Biology of Naegleria fowleri	D. T. John	36:101-124
The Biology of Rickettsine	E. Weiss	36:345-70
The Laboratory Approach to the Detection of		
Bacteremia	R. C. Tilton	36:467-93
MORPHOLOGY, ULTRASTRUCTURE, AND DI	FFERENTIATION	
Motility and Chemotaxis of Spirochetes	E. Canale-Parola	32:69-99
Nature of the Swarming Phenomenon in Proteus	F. D. Williams, R. H. Schwarzhoff	32:101-22
Formation, Properties, and Germination of Actinomycete Spores		32:185-219
Fungal Protoplasts: Isolation, Reversion, and	J. C. Ensign	
Fusion	J. F. Perberdy	33:21-39
Lipopolysaccharides of Photosynthetic Prokaryotes	J. Weckesser, G. Drews, H. Mayer	33:215-39
The Role of Electron Microscopy in the Elucidation of Bacterial Structure and		
Function Flagellar Structure and Function in	J. W. Costerton	33:459-79
Eubacteria The Immunological Activities of Bacterial	R. N. Doetsch, R. D. Sjoblad	34:69-108
Peptidoglycans Proteins of the Outer Membrane of	D. E. S. Stewart-Tull	34:311-40
Gram-Negative Bacteria	M. J. Osborn, H. C. P. Wu	34:369-422
Some Aspects of Structure and Function		
in N ₂ -Fixing Cyanobacteria	W. D. P. Stewart	34:497-536
Glycocalyx in Nature and Disease	J. W. T. Irvin, KJ. Cheng	35:299-324
Phycobilisomes: Structure and Dynamics	A. N. Glazer R. P. Blakemore	36:173-98
Magnetotactic Bacteria	R. P. Blakemore	36:217-238
ANIMAL PATHOGENS AND DISEASES		
Group B Streptococcal Infection in Humans	H. W. Wilkinson	32:41-57
Medically Important Yeasts	D. G. Ahearn	32:59-68
The Genus Serratia	P. A. D. Grimont, F. Grimont	32:221-48
The Genus Campylobacter	R. M. Smibert	32:673-709
Laboratory-Associated Infections: Incidence, Fatalities, Causes and Prevention	R. M. Pike	33:41-66
Cellular and Molecular Mechanisms of Action of Bacterial Endotoxins	S. G. Bradley	33:67-94
Associations Between Major Histocompatibility Antigens and	o. o. bizzo,	33.07
Susceptibility to Disease	R. M. Zinkernagel	33:201-13
Recent Taxonomic Developments and	R. M. Zinkernagei	33:201-13
Changes in Medical Mycology	M. R. McGinnis	34:109-35
Chlamydiae	J. Schachter, H. D. Caldwell	34:285-309
Diseases of Humans (Other Than Cholera) Caused by Vibrios	P. A. Blake, R. E. Weaver, D. G.	
Plasmid-Medicated Factors Associated with	Hollis	34:341-67
Virulence of Bacteria to Animals Pathogenesis and Immunology of Treponema	L. P. Elwell, P. L. Shipley	34:465-96
pallidum	T. J. Fitzgerald	35:29-54
Bacterial Kidney Disease of Salmonid Fish	J. L. Fryer, J. E. Sanders	35:273-98
Immunobiology of Dental Caries: Microbial Aspects and Local Immunity	J. R. McGhee, S. M. Michalek	35:595-638
Intestinal Microbiota of Termites and Other	J. A. Breznak	36:323-44
Xylophagous Insects	J. A. DICZNAK	30:323-44
PLANT PATHOGENS AND DISEASES		
PLANT PATHOGENS AND DISEASES		
Initiation of Plant Root-Microbe Interactions	E. L. Schmidt	33:355-76
	E. L. Schmidt A. K. Chatterjee, M. P. Starr R. F. Whitcomb	33:355-76 34:645-76 34:677-709

560 CHAPTER TITLES

	Interaction of Bacteria and Fungi With		
	Lectins and Lectin-Like Substances	T. G. Pistole	35:85-112
	Nematodes: Development as Plant Parasites	A. R. Maggenti	35:135-54
	Selected Topics in Biological Control	M. N. Schroth, J. G. Hancock	35:453-76
	Plasmids Specifying Plant Hyperplasias	E. W. Nester, T. Kosuge	35:531-65
	The Plant Pathogenic Corynebacteria	A. K. Vidaver	36:495-517
	The Hant Pathogenic Cotyneoacteria	A. R. VIGETCI	30.433-317
IM	IMUNOLOGY		
	Phagocytosis as a Surface Phenomenon	C. J. van Oss	32:19-39
	Group B Streptococcal Infection in Humans	H. W. Wilkinson	32:41-57
	Seroepidemiology of Parasitic Diseases	H. O. Lobel, I. G. Kagan	32:329-47
	Dynamics of the Macrophage Plasma		
	Membrane	S. H. Zuckerman, S. D. Douglas	33:267-307
	Perspectives on the In Vivo Location of		
	Cellular Interactions in the Humoral		
	Immune Response	J. R. Lumb	33:439-57
	The Immunological Activities of Bacterial		
	Peptidoglycans	D. E. S. Stewart-Tull	34:311-40
	Chemically Defined Antiviral Vaccines	R. Arnon	34:593-618
	Pathogenesis and Immunology of Treponema	To ranon	51.575 616
	pallidum	T. J. Fitzgerald	35:29-54
	Psychoneuroendocrinological Effects on the	a. s. a negerano	33.47-34
	Immune Response	G. F. Solomon, A. A. Amkraut	35:155-84
	Antigenic Characterization of Viruses by	G. I. Bolomon, F. F. Finalan	33.133-04
	Monoclonal Antibodies	J. W. Yewdell, W. Gerhard	35:185-206
	Host Defense Mechanisms at Mucosal	J. W. Tewacii, W. German	33.163-200
	Surfaces	P. C. McNabb, T. B.Tomasi	35:477-96
	Immunobiology of Dental Caries: Microbial	1. C. Micitado, 1. D. Tolliasi	33.411-30
	Aspects and Local Immunity	J. R. McGhee, S. M. Michalek	35:595-638
	Infections Due to Haemophilus Species Other	J. R. McOnec, S. M. Michalek	33:393-038
	than H. influenzae	W. L. Albritton	36:199-216
		M. K. Bach	36:371-413
	Mediators of Anaphylaxis and Inflammation Microbiological Models as Screening Tools for	M. K. Bach	30:3/1-413
	Anticancer Agents: Potentials and		
	Limitations	R. J. White	36:415-33
	Limitations	R. J. White	30:413-33
V	ROLOGY		
-	Developmental Aspects of Selected Antiviral		
	Chemotherapeutic Agents	R. J. Whitley, C. A. Alford	32:285-300
	The Gene Order of Avian RNA Tumor		52.205 500
	Viruses Derived from Biochemical Analyses		
	of Deletion Mutants and Viral		
	Recombinants	LH Wang	32:561-92
	Search for Antiviral Agents	R. R. Grunert	33:335-53
	Concentration of Viruses from Water by		00.000
	Membrane Chromatography	C. Wallis, J. L. Melnick, C. P.	
		Gerba	33:413-37
	Virus-Like Particles of Yeast	J. A. Bruenn	34:49-68
	Modified Bases in Bacteriophage DNAs	R. A. J. Warren	34:137-58
	Chemically Defined Antiviral Vaccines	R. Arnon	34:593-618
	Defective Interfering Influenza Viruses	D. P. Navak	34:619-44
	Antigenic Characterization of Viruses by	D. I. Itayan	34.017 44
	Monoclonal Antibodies	J. W. Yewdell, W. Gerhard	35:185-206
	The Evolution of RNA Viruses	D. C. Reanney	36:47-73
	Viroids and Their Interactions with Host	D. C. recanney	30.47-73
	Cells	T. O. Diener	36:239-58
	Cells	1. O. Dicilci	30.235-30
C	HEMOTHERAPY AND CHEMOTHERAPEUT	TC AGENTS	
	Developmental Aspects of Selected Antiviral		
	Chemotherapeutic Agents	R. J. Whitley, C. A. Alford	32:285-300
	Extrachromosomally Determined Antibiotic		
	Production	D. A. Hopwood	32:373-92
	Plasmid-Determined Resistance to		
	Antimicrobial Agents	J. Davies, D. I. Smith	32:469-518

Mutants Blocked in Antibiotic Synthesis	S. W. Queener, O. K. Sebek, C. Vézina	32:593-636
The Mechanism of the Irreversible	· came	32.373-030
Antimicrobial Effects of Penicillins: How the Beta-Lactam Antibiotics Kill and Lyse		
Bacteria	A. Tomasz	33:113-37
Mutational Biosynthesis of New Antibiotics	S. J. Daum, J. R. Lemke	33:241-65
Search for Antiviral Agents	R. R. Grunert	33:335-53
Members of the Genus Actinoplanes and their	F. Parenti, C. Coronelli	33:389-411
Natural β-Lactam Antibiotics Nitrogen Metabolite Regulation of Antibiotic	H. Aoki, M. Okuhara	34:159-81
Biosynthesis	Y. Aharonowitz	34:209-33
Antibiotics From Micromonospora	G. H. Wagman, M. J. Weinstein	34:537-57
PAIRTICE		
BENETICS		
Chromatin in Eukaryotic Microbes	P. A. Horgen, J. C. Silver	32:249-84
Genetics and Physiology of Acinetobacter Extrachromosomally Determined Antibiotic	E. Juni	32:349-71
Production Regulation of Bacterial Growth, RNA, and	D. A. Hopwood	32:373-92
Protein Synthesis Plasmid-Determined Resistance to	D. P. Nierlich	32:393-432
Antimicrobial Agents	J. Davies D. I. Smith	32:469-518
Evolution of Bacterial Genome	M. Riley, A. Anilionis	32:519-60
The Gene Order of Avian RNA Tumor	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Viruses Derived from Biochemical Analyses of Deletion Mutants and Viral		
Recombinants	LH. Wang	32:561-92
Mutants Blocked in Antibiotic Synthesis	S. W. Queener, O. K. Sebek, C. Vézina	32:593-636
Associations Between Major		
Histocompatibility Antigens and		
Susceptibility to Disease	R. M. Zinkernagel	33:201-13
Myxobacteria: Cell Interactions, Genetics, and		
Development	D. Kaiser, C. Manoil, M.	
	Dworkin	33:595-639
Modified Bases in Bacteriophage DNAs	R. A. J. Warren	34:137-58
Mutagenicity and Carcinogenicity of Mycotoxins: DNA Binding as a Possible		
Mode of Action	A. A. Stark	34:235-62
Plasmid-Mediated Factors Associated With		
Virulence of Bacteria to Animals	L. P. Elwell, P. L. Shipley	34:465-96
Genetics of Erwinia Species	A. K. Chatterjee, M. P. Starr	34:645-76
Evolutionary Significance of Accessory DNA		
Elements in Bacteria	A. Campbell	35:55-83
Genetics and Regulation of Nitrogen Fixation	The Competent	55.55
Octioned and regulation of retirogen a manon	G. P. Roberts, W. J. Brill	35:207-35
Genetic Studies With Bacterial Protoplasts	D. A. Hopwood	35:237-72
Translational Initiation in Prokaryotes	L. Gold, D. Pribnow, T. Schneider,	
•	S. Shinedling, B. S. Singer, G.	
	Stormo	35:365-403
GROWTH AND NUTRITION		
Growth Yield and Efficiency in		
Chemosynthetic Microorganisms	W. J. Payne, W. J. Wiebe	32:155-83
Microbes as Food for Humans	S. G. Kharatyan	32:301-27
Regulation of Bacterial Growth, RNA, and		
Protein Synthesis	D. P. Nierlich	32:393-432
Organic Nutrition of Chemolithotrophic		
Bacteria	A. Matin	32:433-68
Mutational Biosynthesis of New Antibiotics	S. J. Daum, J. R. Lemke	33:241-65
Microbial Envelope Proteins Related to Iron	J. B. Neilands	36:285-309

562 CHAPTER TITLES

ш	ETABOLISM, BIOCHEMISTRY, AND REGUL Motility and Chemotaxis of Spirochetes	E. Canale-Parola	32:69-99
	Nature of the Swarming Phenomenon in		32:09-99
	Proteus	F. D. Williams, R. H. Schwarzhoff	32:101-22
	Genetics and Physiology of Acinetobacter Regulation of Bacterial Growth, RNA, and	E. Juni	32:239-71
	Protein Synthesis Plasmid-Determined Resistance to	D. P. Nierlich	32:393-432
	Antimicrobial Agents	J. Davies, D. I. Smith	32:469-518
	Microbial Transformations of Metals Catabolic Pathways of Coryneforms,	A. O. Summers, S. Silver	32:637-72
	Nocardia, and Mycobacteria	T. A. Krulwich, N. J. Pelliccione	33:139-68
	Arginine Catabolism by Microorganisms	A. T. Abdelal	33:139-68
	Biosynthesis of Polysaccharides by Prokaryotes	S. J. Tonn, J. E. Gander	33:169-90
	Lipopolysaccharides of Photosynthetic		33.109-90
	Prokaryotes	J. Weckesser, G. Drews, H.	22.016.20
	Materianal Dissert had af Non-Anthiesia	Mayer	33:215-39
	Mutational Biosynthesis of New Antibiotics Biological and Biochemical Aspects of	S. J. Daum, J. R. Lemke	33:241-65
	Microbial Growth on C ₁ Compounds	J. Colby, H. Dalton, R. Whittenbury	33:481-517
	The Chemistry and Biosynthesis of Selected		
	Bacterial Capsular Polymers	F. A. Troy II	33:519-60
	The Biology of Gastrointestinal Bacteroides Flagellar Structure and Function in	J. M. Macy, I. Probst	33:561-94
	Eubacteria Oxygen and Hydrogen in Biological Nitrogen	R. N. Doetsch, R. D. Sjoblad	34:69-108
	Fixation Nitrogen Metabolite Regulation of Antibiotic	R. L. Robson, J. R. Postgate	34:183-207
	Biosynthesis Proteins of the Outer Membrane of	Y. Aharonwitz	34:209-33
	Gram-Negative Bacteria Chemical and Fuel Production by Anaerobic	M. J. Osborn, H. C. P. Wu	34:369-422
	Bacteria Some Aspects of Structure and Function	J. G. Zeikus	34:423-64
	in N ₃ -Fixing Cyanobacteria Interaction of Bacteria and Fungi With	W. D. P. Stewart	34:497-536
	Lectins and Lectin-Like Substances Genetics and Regulation of Nitrogen	T. G. Pistole	34:85-112
	Fixation Physiology and Biochemistry of Aerobic	G. P. Roberts, W. J. Brill	35:207-35
	Hydrogen-Oxidizing Bacteria Gliding Motility of Prokaryotes:	B. Bowien, H. G. Schlegel	35:405-52
	Ultrastructure, Physiology, and Genetics Colicins and Other Bacteriocins with	R. P. Burchard	35:497-529
	Established Modes of Action.	J. Konisky	36:125-144
	Immobilized Microbial Cells	S. Fukui, A. Tanaka	36:145-172
	Metabolic Acquisitions Through Laboratory Selection	R. P. Mortlock	36:259-84
	Mechanism of Incorporation of Cell Envelope	R. I. MOIGCE	30:237-04
	Proteins in Escherichia Coli	S. Michaelis, J. Beckwith	36:435-65
A	PPLIED MICROBIOLOGY AND ECOLOGY		
	The Genus Serratia	P. A. D. Grimont, F. Grimont	32:221-48
	Microbes as Food for Humans	S. G. Kharatyan	32:301-27
	Microbial Transformations of Metals	A. O. Summers, S. Silver	32:637-72
	Population Ecology of Nitrifying Bacteria	L. W. Beiser	33:309-33
	Initiation of Plant Root-Microbe Interactions	E. L. Schmidt	33:355-76
	Biology of Oligotrophic Bacteria	S. I. Kuznetsov, G. A. Dubinina,	
		N. A. Lapteva	33:377-87

CHAPTER TITLES

Concentration of Viruses from Water by		
Membrane Chromatography	C. Wallis, J. L. Melnick, C. P.	
	Gerba	33:413-37
Mutagenicity and Carcinogenicity of		***************************************
Mycotoxins: DNA Binding as a Possible		
Mode of Action	A. A. Stark	34:235-62
Ore Leaching By Bacteria	D. G. Lundgren, M. Silver	34:263-83
Chemical and Fuel Production by Anaerobic		
Bacteria	J. G. Zeikus	34:423-64
Bacterial Kidney Disease of Salmonid Fish	J. L. Fryer, J. E. Sanders	35:273-98
The Ecology and Role of Protozoa in Aerobic		
Sewage Treatment Processes	C. R. Curds	36:27-46
THER		
The Social, Political, and Religious		
Background to the Work of Louis Pasteur	J. Farley	32:143-54
Evolution of the Bacterial Genome	M. Riley, A. Anilionis	32:519-60
Laboratory-Associated Infections: Incidence,		
Fatalities, Causes, and Prevention	R. M. Pike	33:41-66
The Role of Electron Microscopy in the		
Elucidation of Bacterial Structure and		
Function	J. W. Costerton	33:459-79
Why Microbial Predators and Parasites Do		
Not Eliminate Their Prey and Hosts	M. Alexander	35:113-33
Coping with Computers and Computer		
Evangelists	M. I. Krichevsky	36:311-21